

Publication

**EP 0547416 A3 19940209**

Application

**EP 92120389 A 19921128**

Priority

**US 80813491 A 19911216**

Abstract (en)

[origin: EP0547416A2] A fluid treatment apparatus and method wherein uniform treatment of a substrate (e.g., a thin, metallic sheet) is treated (e.g., etched) during movement thereof. This treatment involves directing a plurality of fluid jets through a collected first fluid onto one of the substrate's surfaces in such a manner that the fluid of each fluid jet will engage (collide with) the fluid from the nearest fluid jet as a result of being maintained across the substrate's surface at a predetermined velocity prior to mixing of the jets with surrounding fluid. Prevention of such mixing prior to such engagement has proven to assure uniform treatment of the substrate. In one aspect of the invention, fluid is directed onto opposite surfaces of the substrate in this fashion, the fluid from the lower surface, however, being passed through air or similar ambient and thus prevented from mixing therewith prior to such engagement.

IPC 1-7

**H03K 3/00**; **C23F 1/08**; **B05B 13/02**

IPC 8 full level

**B05C 3/00** (2006.01); **B05C 5/00** (2006.01); **C23F 1/08** (2006.01); **H05K 3/00** (2006.01)

CPC (source: EP US)

**C23F 1/08** (2013.01 - EP US); **H05K 3/0085** (2013.01 - EP US)

Citation (search report)

- [X] EP 0329808 A1 19890830 - SCHMID GMBH & CO GEB [DE]
- [A] EP 0381372 A2 19900808 - AMERICAN TELEPHONE & TELEGRAPH [US]
- [A] EP 0387001 A2 19900912 - ELECTROVERT LTD [CA]
- [A] DE 1200638 B 19650909 - WERNER MOLL

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

**US 5192394 A 19930309**; EP 0547416 A2 19930623; EP 0547416 A3 19940209; JP 2519381 B2 19960731; JP H05237428 A 19930917

DOCDB simple family (application)

**US 80813491 A 19911216**; EP 92120389 A 19921128; JP 32882592 A 19921113